

# THE NORTHLAND SKY WATCHER

*For National Weather Service weather watchers of  
northeastern Minnesota and northwestern Wisconsin*

## NWS Duluth Hosts *Take Your Child to Work Day*



*Danny, Rebecca and Jeremy at the WDIO-TV broadcast desk.*

**T**ake a Child to Work Day was held on two days this year at the NWS Duluth due to short-staffing on April 28th, the day which "Take a Child to Work Day" was nationally observed. On April 25<sup>th</sup>, three children ranging from 8 to 10 years old visited our office. The children were: Rebecca, daughter of Greg Frosig, meteorologist; Jeremy Quam, neighbor of Ed Shimon, meteorologist; and Danny Howe, neighbor of Dean and Tracy Packingham, meteorologists. The morning started off with doughnuts and the morning weather briefing, followed by an overview of staff duties provided by Dean Packingham and Sam Standfield, hydro-meteorological technician. Next, Greg showed the

children the weather radio console, and allowed each child to make a recording.

The children spent the rest of the morning doing hands-on weather-related activities with Greg and Ed. They made their own "tornadoes in a jar," which they took home as souvenirs. They also tried out our homemade weather word-find and crossword puzzles. Lunchtime was spent eating pizza and watching the movie "Twister". After the movie, the kids visited the radar dome with Martin Lee, electronics technician, and Don Price, Electronic Systems Analyst. Next, Martin took them to see the automated observing equipment, then they were off to the FAA air traffic control tower for a tour. There they were shown the equipment and operations of the air traffic controllers and how they use our aviation forecasts.

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The rest of the afternoon was spent at WDIO-TV. Two of the station's weather broadcasters, Sue Sayovitz and Collin Ventrella, gave a tour of the station, including the "weather hut," where all of the weather information is gathered and assembled for broadcast. The guests were given an opportunity to pretend they were weather broadcasters in front of real cameras. We're still not sure who had more fun - the kids or the adults!

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On April 28<sup>th</sup>, 10-year old Anna-Marie spent the morning of "Take a Child to Work Day" with her parents, Jim Christenson, Data Acquisition Program Manager, and Carol Christenson, Warning Coordination Meteorologist. The highlight of Anna's morning was a tour of the radar dome with Don Price as tour guide. Anna also spent the morning learning about weather maps and forecasting. The following day she gave an oral report of her morning at the NWS to her class at Hermantown Elementary School. She showed a very interesting video of her 130 foot ascent into the radar dome.

*- Tracy Packingham, forecaster*



*Carol Christenson shows her daughter, Ann-Marie, how weather maps are made.*



## Listen For a NOAA Weather Radio Broadcast Near You!

A huge effort is under way to increase NOAA Weather Radio (NWR) transmitters across Minnesota and Wisconsin, and by the end of 2001, most northlanders should be able to pick up a weather broadcast in their location.

### *State of Wisconsin Nearing End of Expansion Plan*

Since 1989, the State of Wisconsin has funded eight NWR transmitters through its Education Communications Board. Six of those transmitters were assembled in 1999. Three more transmitters will go up in 2000 and 2001- and all will broadcast into northwestern Wisconsin. The first one to go up will likely be near Withee, in Clark County. This broadcast should reach into southern Price County and cover the gaps in coverage from the Park Falls transmitter. The earliest this could be operational would be late this fall.

Boaters on Lake Superior will be glad to hear that a NWR transmitter is slated for the new tower near Ashland. And finally, we are expecting to get a transmitter up in the Spooner area. Both of these sites should be up and running late next Spring.

### *Expansion will be going full force in Minnesota*

A combination of federal, state, and local funding will bring many NWR transmitters to Minnesota in the coming year. While most of the exact locations of the sites are not known yet, these are the sites that we are confident will be operational within the year: Coleraine, Ely, near Grand Marais on Bogus Lake, and Gunflint Lake. Other proposed areas for NWR sites include Finland, Baudette, Virginia, Aitkin, Longville, and Sandstone. We'll keep you posted!





# Tornado

## Facts and Myths

Ž In an average year, 800 tornadoes are reported nationwide, resulting in 80 deaths and over 1,500 injuries.

### Ž From 1950 through 1994:

UTexas was ranked first in tornado occurrences with 5,490 tornadoes.

UOklahoma came in second with 2,300 tornadoes.

UWisconsin ranked 17th in tornado occurrences with 844 tornadoes causing 94 fatalities.

UMinnesota came next at 18<sup>th</sup> with 832 tornadoes causing 87 fatalities.

Ž Only 2% of all tornadoes are classified as violent (winds >205 mph), but violent tornadoes cause 70% of all tornado deaths.

Ž **Deadliest tornado outbreak** — The Tri-State Tornado Outbreak of March 18, 1925 killed 689 people in Missouri, Illinois, and Indiana. Murphrysboro, Ill. had 234 of those deaths, and West Frankfort, Ill. had 127.

Ž **Biggest, Costliest Outbreaks** — The April 3-4, 1974 Super Outbreak was the largest known outbreak, with 148 tornadoes in 11 states, killing 315 people, injuring more than 5,300, and causing \$600 million in damages. Alabama, Kentucky, and Ohio were the states hardest hit. Perhaps the most notable tornado of the outbreak was one which touched down southwest of Xenia, Ohio. The violent tornado destroyed half the town, killing 34 and causing property damages of more than \$100 million.

Ž Fittingly, the biggest known tornado occurred in

Texas -- specifically, in the high plains of the Texas Panhandle near Gruver on June 9, 1971. At times, the tornado was over 2 miles wide, with an average width of about 2,500 yards. This is probably close to the maximum size for tornadoes; but it is possible that larger, unrecorded ones have occurred.

Ž **Myth:** The low pressure with a tornado causes buildings to explode as the tornado passes overhead.

**Fact:** Violent winds and debris slamming into buildings cause most structural damage.

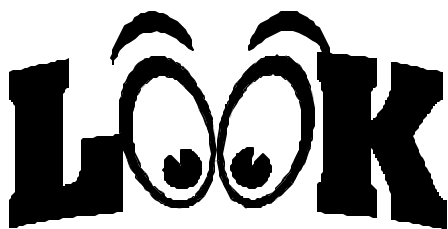
Ž **Myth:** Windows should be opened before a tornado approaches to minimize pressure.

**Fact:** Leave the windows alone- go immediately to a safe place. Opening the windows is absolutely useless, a waste of precious time, and can be very dangerous. Don't do it. You may be injured by flying glass trying to do it. And if the tornado hits your home, it will blast the windows open anyway.

Ž **Myth:** Mountainous areas are safe from tornadoes.

**Fact:** in the late 1980s a tornado swept through Yellowstone National park, leaving a path of destruction up and down a 10,000 foot mountain.

Ž Intense tornadic winds can bend a tree or other objects, creating cracks in which debris (e.g., hay, straw) becomes lodged before the tree straightens and the crack tightens shut again.



## A reminder to our severe weather spotters...

WFO Duluth is issuing routine daily Severe Weather Outlooks between 900 am and 930 am. These outlooks are available on our web page at <http://www.crh.noaa.gov/dlh/duluth.htm>. Just click on "Current Weather", then "Minnesota (or Wisconsin) Weather", then on "Special Weather Statements". These outlooks will give you a "heads-up" on the possibility of severe weather for that day and whether or not you can expect the spotter groups to be activated. If there is any risk of severe thunderstorms or tornadoes that day, the outlooks will also be broadcast on NOAA weather radio. If you participate in the severe weather spotter networks, these outlooks can help you plan your day. We will continue to issue the outlooks every day until September 1<sup>st</sup>.

The Severe Weather Outlook is based on the National Weather Service Storm Prediction Center's convective outlooks. These convective outlooks give the potential for severe thunderstorms for the entire country for today (or the rest of today) and tomorrow. These outlooks can be quickly accessed through our web page by clicking on "Warning Program", "Storm Prediction Center", and "Convective Outlooks". You can then click on the graphic to enlarge it. The outlooks give the risk of severe weather as SLGT (slight), MDT (moderate), or HIGH. To help you interpret these terms, here are the official definitions. Note that with all of these risks, severe thunderstorms are expected to develop. The main differences are in the concentration, coverage, and magnitude.

**SLGT risk:** Implies well-organized severe thunderstorms

are expected, but in **small numbers** and/or **low coverage**. Here are the guidelines: a high probability of 5 to 29 reports of 1 inch or larger hail, and/or 3 to 5 tornadoes, and/or 5 to 29 wind events...OR...low/moderate probability of moderate to high risk being issued later, if some conditions come together.

**MDT risk:** Implies a **greater concentration** of severe thunderstorms, and in most situations, **greater magnitude** of severe weather. Many NWS offices will "beef-up" their forecasts to include the phrase "some thunderstorms may be severe" when a SLGT or MDT risk is issued. Here are the guidelines: a high probability of at least 30 reports of hail 1 inch or larger, or 6 to 19 tornadoes, or numerous wind events (30 that might be associated with a squall line, bow echo or derecho).

**HIGH risk:** Almost always means a **major severe weather outbreak** is expected, with great coverage of severe weather reports and enhanced likelihood of extreme severe weather (i.e., violent tornadoes or extreme convective wind events over a large area). Here are the guidelines: a high probability of at least 20 tornadoes with at least 2 of them rated \$F3, or an extreme derecho causing 50 or more widespread wind events, 50 or more with numerous higher end wind (\$80 mph), and structural damage reports.

*-Ed Flenz, forecaster*

## A New Addition



Norv Larson, WFO Duluth's Science and Operations Officer, and his wife, Carolyn, recently welcomed a new



baby girl to their family. Baby Hannah was born May 30. Hannah has two older brothers, Max, 6, and Alex, 3. Congratulations!



## *Thanks for a Great Skywarn Training Season!*

**W**e visited 25 northland towns to give spotter training to over 700 people. About half were Skywarn spotters coming back for training (which is required at least every four years), and the other half were newcomers to the spotter ranks. Skywarn training is the highlight of the year for us as we enjoy getting out on the road, meeting new people, seeing old faces, and checking out the scenery.

### **The following should be reported to our office:**



Report any size hail.



Report thunderstorm winds greater than 50 mph.



Report damage from hail or thunderstorm winds.



Report persistent, rotating wall clouds.



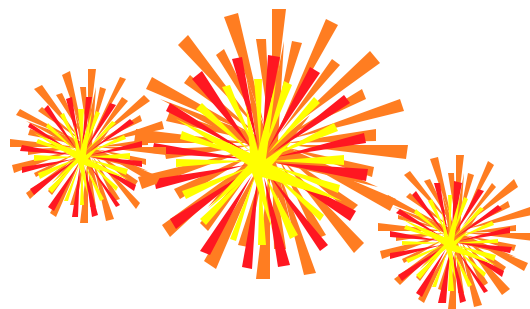
Report funnel clouds and tornadoes.



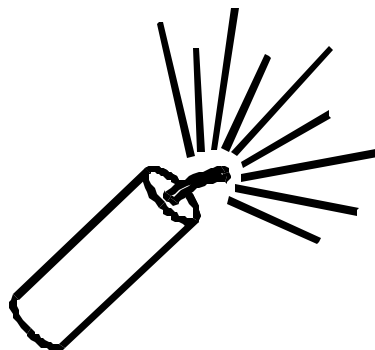
Report flooding.

## **Climate Prediction Center Forecasts A Normal Northland July**

**T**he July climate outlook issued by the NWS' Climate Prediction Center calls for seasonal conditions for the Northland. This means we can expect daytime highs to range from the middle 70s to the lower 80s and nighttime temperatures to range from 55 to 60 degrees. A couple days of 90 degrees or higher can also be expected. A normal July will receive almost 4 inches of rain. These normals are the arithmetic means of climate data collected from 1961 through 1990.



## **Have a safe summer!**



The *Northland Sky Watcher* is a newsletter published by the National Weather Service Office in Duluth, MN for our weather spotters and observers. We welcome your questions and comments. We can be reached by:

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